

Date: Friday, 04/04/2008 9:22:13 AM
 User: Julie Lecocq

Process Sheet

Customer	CU-DAR001 Dart Helicopters Services			Drawing Name	AFT CROSSTUBE		
Job Number	38402			Part Number	D2890		
Estimate Number	10377			Drawing Number	D2890 REV B		
P.O. Number				Project Number	N/A		
This Issue	04/04/2008	S.O. No.		Drawing Revision	B		
Prsht Rev.	NC			Material			
First Issue	/ /	Type	PURCHASED PARTS	Due Date	30/04/2008	Qty:	1 Um: Each
Previous Run	38401						
Written By							
Checked & Approved By	<u>SDO 108.04.4</u>						
Comment	Est. D 05.03.21 Removed Bending procedures KJ/JLM						

Additional Product

Job Number:



Seq. #:	Machine Or Operation:	Description :
1.0	D6008180	Crosstube extrusion
Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s) Pick: Qty Part # Description Batch 1 D6008-180 Crosstube extrusion <u>B34688</u>		
2.0	BENDING	BENDING MACHINE - SKIDTUBES
Comment: BENDING MACHINE EL 8-4-25		
1-Bend D2890 as per Dwg D2890 and Folio FT002		
3.0	QC6	DIMENSIONAL CHECK
Comment: DIMENSIONAL CHECK <u>CP 08.04.25</u>		
4.0	SKIDTUBES 1	SKIDTUBESS RESOURCE 1
Comment: LANDING GEAR RESOURCE 1 <u>7 B38575</u> 1-Deburr and Polish <u>assigned to B38575</u>		
5.0	HAND FINISHING1	HAND FINISHING RESOURCE #1
Comment: HAND FINISHING RESOURCE #1 Chemical Conversion Coat as per QSI 005 4.1		

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: D2890 PAR #: NA Fault Category: Prod/Cross tube NCR: Yes No DQA: Date: 08/04/08
 D205-596 QA: N/C Closed: Date: 08/04/09

		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
08.04.25	2	Widths under tolerance. REF DIM SHEET.	GP 08.04.25 PC QSI 042	Cut at 30.0" High. Tube acceptable	✓✓	✓✓ initials	GP 08.04.25 PC QSI 042	✓✓ initials

NOTE: Date & initial all entries

Date: Friday, 04/04/2008 9:22:14 AM
User: Julie Lecocq

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: AFT CROSSTUBE

Job Number: 38402

Part Number: D2890

Job Number:



Seq. #: Machine Or Operation:

Description :

6.0 QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

7.0 PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and Stock

Location: B38575

u A o o b l o d r e s

8.0 QC21

FINAL INSPECTION/W/O RELEASE



08/04/28 JJ

Comment: FINAL INSPECTION/W/O RELEASE

Job Completion



MF 08-04-25

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

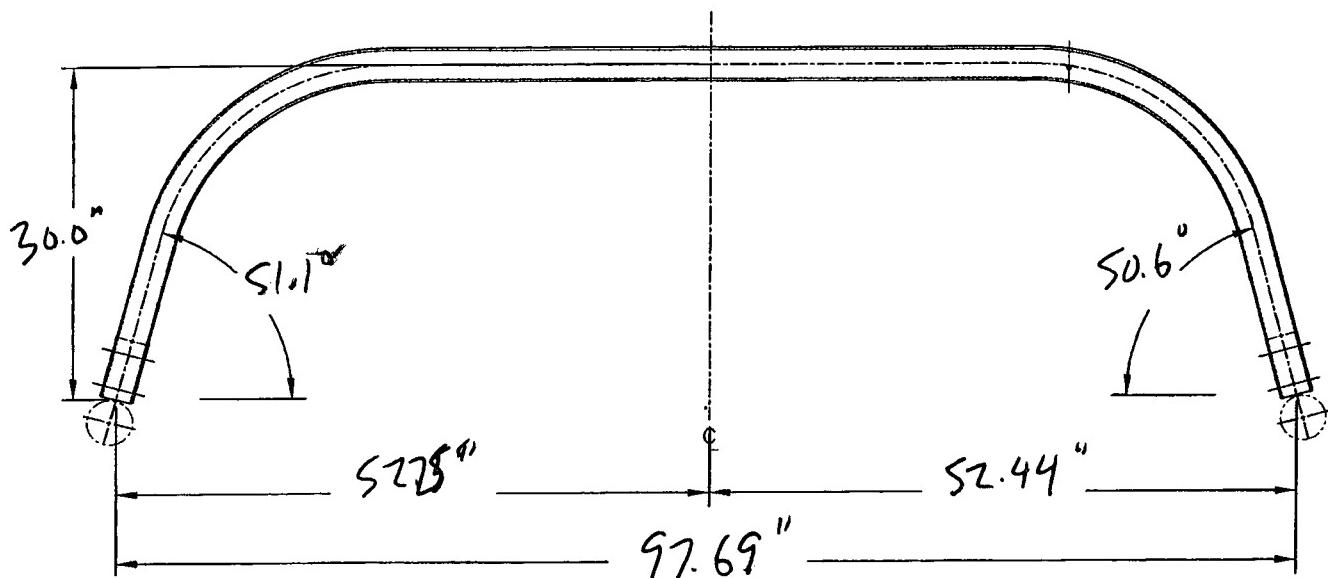
Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____
 QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART AEROSPACE LTD	Work Order:	38402
Description: Crosstube Aft	Part Number:	D2890
Inspection Dwg: D2890	Rev: B	Page 1 of 1

Required Dimension	Min	Max
Height	49.875	50.125
1/2 Span	69.275	69.525
Angle	49	52
Total Span	138.55	139.05



Comments	
<i>Tube acceptable</i>	

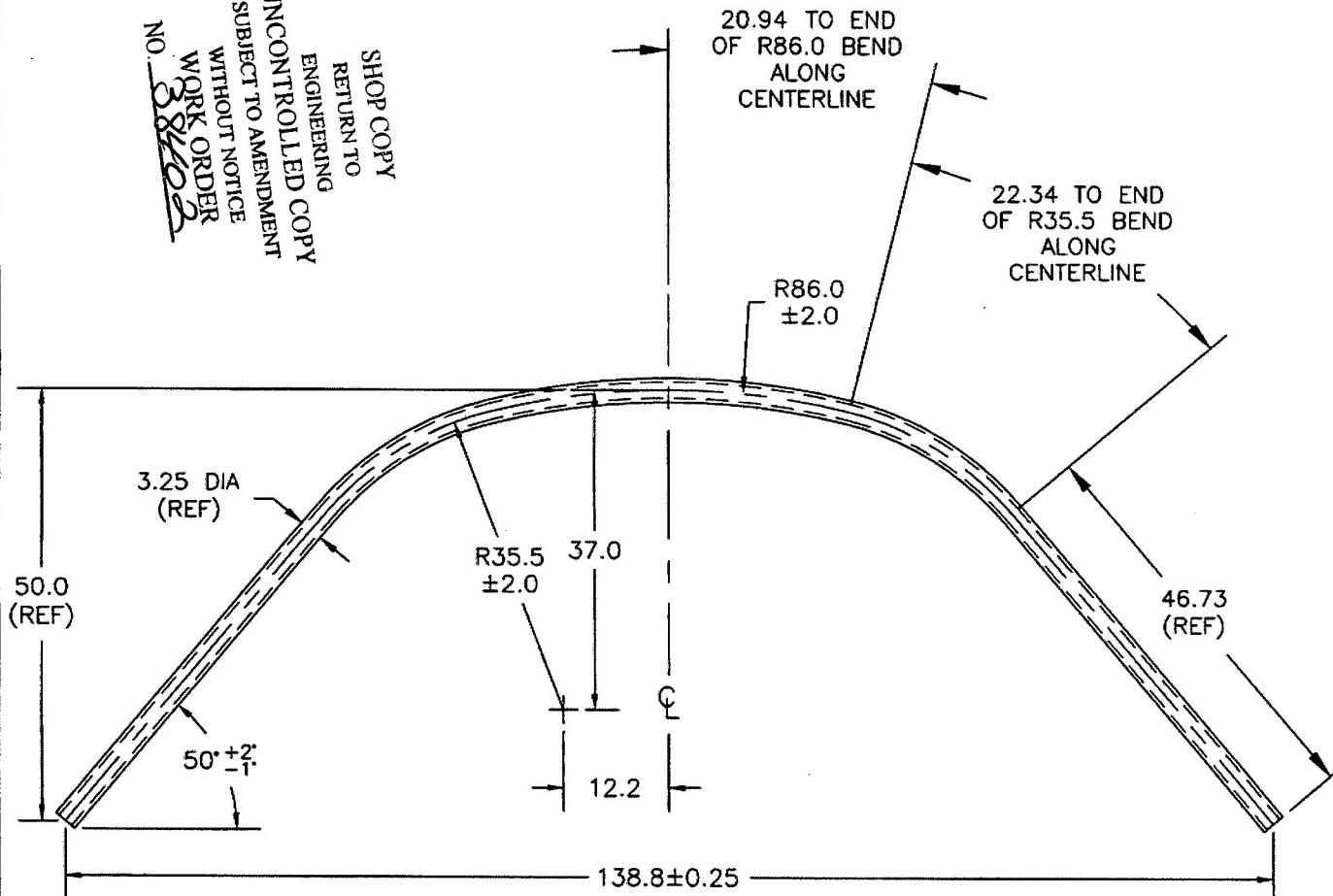
QC15 Inspection	<i>6P</i>
Date	<i>08.04.25</i>

Rev	Date	Change	Revised by	Approved
A	07.02.06	New Issue	KJ/JM <i>[initials]</i>	<i>JW</i>

DART**RELEASED**

02.10.28

DESIGN	DRAWN BY	DART AEROSPACE LTD	
		HAWKSBUCK, ONTARIO, CANADA	
CHECKED	APPROVED	DRAWING NO.	REV. B
		D2890	SHEET 1 OF 1
DATE	TITLE	SCALE	
02.10.18	AFT CROSSTUBE	1:20	
A	99.05.21	NEW ISSUE	
B	02.10.18	ADD TANGENT LENGTHS; CHANGE NOTES	

**NOTES**

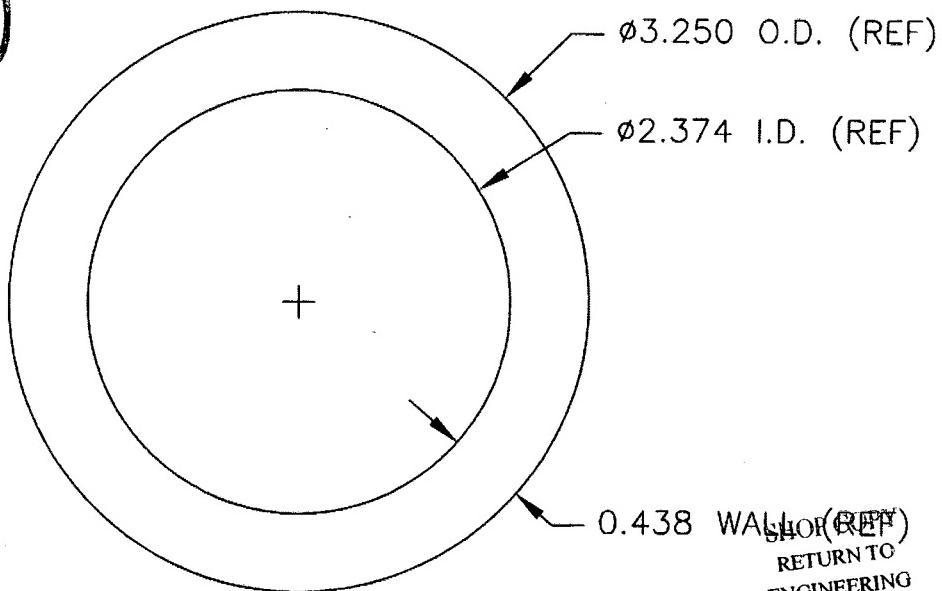
- 1) MATERIAL: MANUFACTURE FROM D6008-180 ($\phi 3.25$ OD x 0.438 WALL)
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
- 3) PART IS SYMMETRIC ABOUT CENTERLINE
- 4) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 5) BEND PROGRESSIVELY WITH MINIMUM OF 3 PASSES
- 6) EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE. THE OUTSIDE SURFACE MUST BE SMOOTH AND FREE FROM SURFACE DEFECTS SUCH AS SCRATCHES, NICKS, OR DENTS. DEFECTS UP TO $0.005"$ MAY BE BLENDDED OUT LONGITUDINALLY. CIRCUMFERENTIAL GRIND MARKS ARE UNACCEPTABLE.



DESIGN	CP	DRAWN BY	CP	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA
CHECKED	✓	APPROVED	✓	DRAWING NO. D6008 REV. A SHEET 1 OF 1
DATE	00.11.17			TITLE CROSSTUBE MATERIAL SCALE 1:1
A	00.11.17			NEW ISSUE

SPECIFICATION CONTROL DRAWING

RELEASED
00.11.24 ✓



NOTES

- 1) D6008-XXX CROSSTUBE

—
LENGTH

WHERE XXX IS LENGTH IN INCHES
EG. 180" LONG TUBE: D6008-180

SHOR (REF)
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 38402

- 2) MATERIAL: 3.250 OD x 0.438 WALL 7075-T6/T6511 (WW-T-700/7 OR QQ-A-225/9 OR QQ-A-200/11) SEAMLESS ALUMINUM TUBE.
MINIMUM ULTIMATE TENSILE STRENGTH = 77 ksi
MINIMUM YIELD TENSILE STRENGTH = 66 ksi
- 3) TOLERANCES ARE PER ASTM B210 AS FOLLOWS:
O.D.: ± 0.008 MEAN (± 0.016 INCLUDING OVALITY)
WALL: ± 0.020 MEAN (± 0.044 INCLUDING ECCENTRICITY)
LENGTH: XXX $+0.125/-0.000$
STRAIGHTNESS: 0.010" DEVIATION / 12" LENGTH
- 4) EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE. THE OUTSIDE SURFACE MUST BE SMOOTH AND FREE FROM SURFACE DEFECTS SUCH AS SCRATCHES, NICKS, OR DENTS. DEFECTS UP TO 0.005" MAY BE BLENDDED OUT LONGITUDINALLY. CIRCUMFERENTIAL GRIND MARKS ARE UNACCEPTABLE.
- 5) CHEMICAL CONVERSION COAT PER DART QSI 005 4.1

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